



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,535	08/09/2001	Charles A. Shaffer	05272.00002	1980
22907	7590	03/09/2004	EXAMINER	
BANNER & WITCOFF 1001 G STREET N W SUITE 1100 WASHINGTON, DC 20001			FISCHER, JUSTIN R	
			ART UNIT	PAPER NUMBER
			1733	

DATE MAILED: 03/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/924,535

Applicant(s)

SHAFFER, CHARLES A.

Examiner

Justin R Fischer

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16, 17 and 20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 16, 17 and 20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 111703.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. The indicated allowability of claims 16, 17, and 20 is withdrawn in view of the newly discovered reference(s) to Ahmad (US 3,866,652) and Murray (US 5,238,734). Rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 16 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Independent claim 16 defines a system having a mixer and an injector, which suggests that they are separate and distinct components. However, these components are described in the original disclosure as an "injector/mixer 2". In particular, it appears that the unused flatproofing material and the ground, used flatproofing material are added to a single apparatus (injector/mixer 2: e.g. screw) that mixes the respective components and is connected to an input device that transfers the mixed filler material to the tire cavity- the ambiguity results since the language of the claimed invention defines two, separate components while it appears that the injector/mixer is actually a single component that carries out both functions. Applicant is asked to clarify the structure of the claimed system without the introduction of new matter.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Staten (US 1,097,824, of record) and further in view of Ahmad (US 3,866,652, newly cited). Staten teaches a tire construction in which the tire cavity is filled with a reinforcing assembly or filler formed of ground/comminuted rubber (as formed by a grinder) and a binder/adhesive material. In forming said filler, Staten includes the respective components in a mold and forms the filler into a shape corresponding to the mold. While this tire construction does not require a transfer of the filler directly into the tire cavity through a valve, one of ordinary skill in the art at the time of the invention would have found it obvious to directly transfer the filler material into the tire cavity versus forming a preform since it eliminates the complexities involved in molding operations. In particular, a direct transfer method eliminates the need to have a wide variety of differently sized molds since the transferred material simply fills up the volume of the tire cavity being filled as desired. Ahmad provides one example of such a direct transfer method in which a binder/adhesive is mixed with particulate matter (e.g. glass or ceramic particles) and subsequently transferred through a valve (via a pump) into a tire cavity. Thus, at the time of the invention, the prior art recognized the ability to directly transfer particle reinforced filler assemblies into a tire cavity using the apparatus

structure of the claimed invention. It is noted that the claimed apparatus structure results by adopting the direct transfer method of Ahmad in the tire construction of Staten.

As to the specific structure, Ahmad identifies the following steps: the adhesive/binder and the particulate matter are mixed (mixer) and a pump transfers the mixed material through a suitable hose or conduit (input device) to a cut-off valve associated with the tire (Column 3, Lines 5-15 and Column 3, Lines 45-65).

Additionally, Ahmad describes the filling of the tire with the filler material until rated pneumatic pressure for the tire is reached (pressure reading would be expected to be provided by pressure sensor). Also, as noted above, the mixer and injector are seen to constitute a single component (this is satisfied by the container of device holding the mixture since it "combines the respective components").

Regarding claim 17, one of ordinary skill in the art at the time of the invention would have readily appreciated the inclusion of a control means to carry out the tire filling process. It is well known that control means are commonly employed in a variety of processing methods in order to provide an efficient method. In particular, Ahmad describes the termination of the filling process once the rated pneumatic pressure is obtained and thus, one of ordinary skill in the art at the time of the invention would have readily appreciated a control means to interrelate the pressure sensor with the injector/filling means to provide an efficient method.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Doan (US 4,970,043, of record). Doan is directed to a system for processing ground rubber

Art Unit: 1733

comprising supplying ground rubber and a cohesive base material (binder) to an elongated screw, wherein said elongated screw is capable of mixing the above noted components and pressurizing and transferring the mixture into a tire cavity (Figure 3, Column 3, Lines 53-62, and Column 8, Lines 44-68). It is initially noted that while Doan fails to expressly include a grinding device, one of ordinary skill in the art at the time of the invention would have readily appreciated and expected such a device since "ground scrap material" is being provided to the feed section (the starting materials, for example vehicle tires, must be placed within a grinding/chopping device to be converted into "ground scrap material"). Furthermore, it is emphasized that the apparatus of Doan is capable of transferring the mixture into a tire cavity, it being recognized that the claims are directed to an apparatus having an intended use and not a method of filling a tire cavity or a tire cavity filling system. As to the inclusion of a controller, Doan suggests that the process conditions in the twin-screw extruder (elongated screw device) vary, for example, as a function of the percentage of granular scrap material (Column 8, Lines 34-41). One of ordinary skill in the art at the time of the invention would have found it obvious to include a control means to monitor the amount of scrap material being provided and electronically signal this information to the screw device to increase or decrease the pressure and/or temperature. The use of a control means is well recognized in a variety of industries in order to optimize a given process with regards to economics, production, and quality. It is further noted that the specific size of the ground material and speed at which the ground material is supplied can also be factors that affect the processing conditions in the screw device.

7. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Murray (US 5,238,734, newly cited). As best depicted in Figure 1, Murray teaches a system for using recycle rubber comprising a grinding device 14 and an elongated rotatable screw device (42, 44), wherein said elongated screw device has the capability of pressurizing and transferring a mixture into a tire cavity. Although Murray fails to include a control means, the use of such a structure is extremely well known in a variety of industries in order to optimize a given process with regards to economics, production, and quality. In particular, it is recognized that processing conditions can vary as a function of a wide variety of variables, for example the amount of a given material, the size of a given material, and the speed at which a given material is supplied. As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to include a control means in the apparatus of Murray as is commonly practiced in a wide variety of industries. Furthermore, it is emphasized that the apparatus of Murray is capable of transferring the mixture into a tire cavity, it being recognized that the claims are directed to an apparatus having an intended use (filling a tire) and not a method of filling a tire cavity or a tire cavity filling system.

### ***Response to Arguments***

8. As noted above, the indicated allowability of claims 16, 17, and 20 has been withdrawn in light of the new rejection set forth above.

**Conclusion**

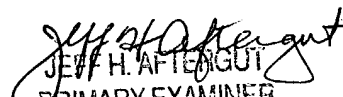
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Justin R Fischer** whose telephone number is **(571) 272-1215**. The examiner can normally be reached on M-F (7:30-4:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Justin Fischer

February 25, 2004

  
JEFF H. AFTERGUT  
PRIMARY EXAMINER  
GROUP 1300